

# Medical Ozone Therapy

## EMERALD WELLNESS

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This book is provided to educate one about the therapeutic health benefits of **Medical Ozone Therapy**

Please take it, read it, and pass it along.



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# Medical Ozone Therapy

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**Ozone Therapy** is a well-researched medical treatment which works to combat disease, purify the body, and optimize health. Treatments involving **Therapeutic Ozone** are quite popular within European healthcare systems and their vast array of health benefits are finally starting to be recognized in North America. Medical Ozone Therapy is safe, non-toxic, and is able to act at various levels in the body to stimulate the immune system, destroy pathogens, viruses and bacteria and treat many health conditions.

At **Emerald Wellness**, we provide our patients with a number of different Ozone therapies which are tailored to the patient's individual health concerns. **High Dose Intravenous Ozone** can be used for the treatment of many difficult health problems and also acts as an excellent prophylactic measure for preventing illness. Prolozone, also known as Ozone Joint Therapy (OJT), has the ability to heal localized injuries and pain throughout the body. After hearing many stories of people having to travel out of country in order to receive qualified Ozone treatment we are proud to be able to offer this service right here in **Edmonton, Alberta**.

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### Overview

Chronic illness is becoming increasingly prevalent in today's society. It is estimated that nearly 60% of North Americans are currently living with at least 1 chronic condition and many have multiple health ailments. These can include conditions such as autoimmune diseases, chronic pain, IBS, fibromyalgia, diabetes, migraines, among many others. While conventional medical approaches are sometimes quite successful in managing the symptoms of these conditions, there is a large

number of individuals whom do not receive adequate relief from conventional intervention alone. Clinical experience regarding **Ozone Therapy** shows excellent results for treating a wide range of chronic health conditions, which conventional medicine often find notoriously difficult to treat. The mechanisms by which Ozone heals (which will be discussed in this book) are proven to be an extremely powerful healing modality which are able to work at many levels in the body and be applied across a multitude of health conditions.

# Introduction

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Some well-researched medical therapies, which are commonplace around the world, are not implemented in the Canadian medical education system. Ozone therapy is one often overlooked by North American medicine. There are over 40, 000 doctors in the world whom regularly use Ozone as an effective tool to treat a number of health conditions each day.

## What is Ozone?

Ozone gas is an inorganic chemical compound comprised of 3 oxygen molecules bonded together and is most well-known for its presence in the earth's atmosphere. In the human body Ozone or 'O<sub>3</sub>' forms an **energetic molecule** which easily donates its third oxygen atom to free radicals that are often causing cell damage through oxidation. When there is ozone present in the body, **oxidation damage** caused by these free radicals is **greatly reduced** because they are made **stable/non-destructive** by the extra oxygen atom given off by the Ozone. Many health problems are caused by oxidative damage and Ozone therapy is able to mitigate this.

Furthermore, at low concentrations, ozone becomes medically active, which triggers several useful biochemical mechanisms and reactivates the antioxidant system, without any toxicity or side effects. Therapeutic Ozone is extremely beneficial for addressing immune system dysfunction because it is such a potent **regulator of the immune system**. This truly unique ability makes Therapeutic Ozone an extremely powerful health tonic. Ozone also kills bacteria and viruses on contact, increases the oxygen level of your cells, detoxifies your body, reduces inflammation, kills cancer cells, increases energy, reduces acidity, and is anti-aging. Although ozone is extremely useful for treating chronic and acute health problems, healthy individuals can reap its health promoting benefits as well.

# Some Therapeutic Benefits of Ozone

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## Ozone is able to strengthen the Immune system

Ozone is an extremely potent regulator of the immune system - when the immune system is overactive (as in auto-immune diseases), Ozone will calm it down. Conversely, if the immune system is underactive as seen in chronic infections, Ozone will help stimulate it. This unique property of Ozone is derived from its activation of immune related messenger molecules (Cytokines) such as interleukin-2, TNF-alpha, and gamma interferon, to name a few.

## Increases the Oxygen Level in your Cells

Without oxygen our cells are unable to make energy, and without adequate energy our cells cannot perform their necessary functions. Ozone therapy is able to increase the total amount of oxygen delivered to our cells by means of our red blood cells. It also works to make our red blood cells more malleable so they can travel along skinnier blood vessels much easier. This makes our system more efficient at supplying tissues and organs with blood and oxygen.

## Kills Pathogens, Bacteria and Viruses on Contact

Ozone is able to disrupt the metabolism of bacterium-cells, most likely through inhibiting the operation of the enzymatic control system. Sufficient amounts of Ozone break through the cell membrane and destroy bacteria. Viruses differ from bacteria in that they only multiply within the host cell, and transform the protein of the host cell into proteins of their own. Ozone is able to diffuse through the protein coat into the nucleic acid core, which results in damaging the viral DNA.

## Able to Destroy Cancer Cells

The way that Ozone is able to target and kill unhealthy cells, while leaving healthy cells alone, is through enzymes. All healthy cells have three enzymes that protect them from being oxidized. Furthermore, all healthy cells crave oxygen and require it to function properly. In fact, every cell is really an oxygen burning machine. Unhealthy cells do not have the important enzymes required to protect them from being oxidized. This makes all unhealthy cells, including cancer cells, defenseless against contact with the correct dose of Ozone.

## Reduces Inflammation

High levels of inflammation in the body is one of the greatest causes of symptoms in chronic disease. Ozone's ability to alter immune function, by causing a controlled oxidative effect, mobilizes the body's antioxidant defenses and resolves inflammation.

### Has Anti-Aging Mechanisms

To derive anti-aging benefits in the body it is critical to raise the amount of oxygen within your blood and in your cells. Ozone therapy is arguably one of the most powerful ways to do this. When used correctly, ozone has been coined a “wonder drug” that has the potential to revolutionize anti-aging medicine.

### The Ability to Increase Energy

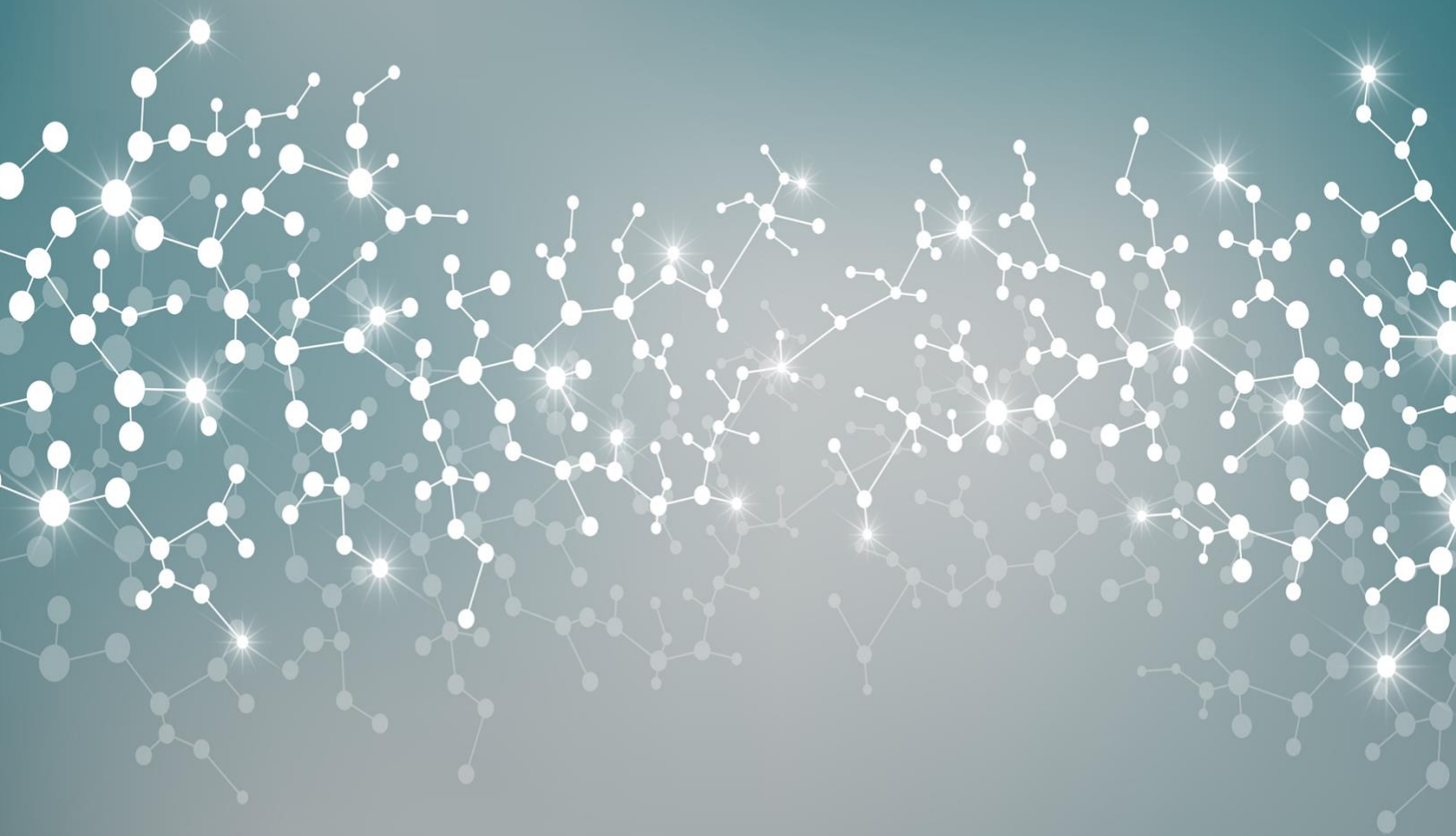
We breathe oxygen so that it can be utilized to create energy for our cells. Illness and aging can often cause this fundamental process to lose efficiency, especially after the age of 30. Ozone helps to “revitalize” the process so that we are able to convert more energy from the oxygen we are breathing. Similar to fine tuning a car’s engine in order to derive more power out of gasoline.

### Reduces Acidity

Some individuals have acidity levels in the body which are not considered optimal for health. Ozone reduces the level of uric acid in the body which can be the cause of gout and the damaging of blood vessels.



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# Health Conditions treated with Ozone Therapy

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The fact that Ozone is able to act upon so many different biological mechanisms in the body means that it is a potent treatment for a wide array of health conditions. Ozone administration, when done in a clinical setting, is a completely safe practice that can work in conjunction with conventional medical treatments or as a stand-alone procedure.

The therapeutic properties of Ozone can have a positive impact on a wide variety of health conditions and can even help repair physical injuries. **High Dose Intravenous Ozone Therapy** is able to take further advantage of Ozone's healing properties because it is able to safely saturate the body with much higher volumes of the molecule.

The underlying cause of most chronic health conditions is due to unchecked inflammation in the body. This makes Ozone's anti-inflammatory properties indicated for helping autoimmune disorders, allergies, and most inflammatory conditions. Cancers, tumors, and a number of vascular conditions can also benefit from Ozone due to its ability to improve blood flow and increase the effects of oxygen and antioxidants. Conditions involving bacterial, fungal, or viral infections are also benefitted by this therapy's ability to destroy pathogens and unwanted microbes.

The fact that Ozone therapy works to make multiple biological systems in the body function more efficiently means that most health conditions can attain positive benefits. New research is indicating that, specifically **High Dose 10 Pass Ozone**, may be able to stimulate stem cell and ATP production. Stem cells have numerous properties for improving health. According to an article published by the National Institute of Health, Ozone therapy is said to "procure surprising wellness in most patients". When Ozone is correctly dosed with ideal administration techniques it has been proven to be safer than aspirin.

Some Health conditions that may benefit from Ozone therapy are:

- Rheumatoid Arthritis
- Cancer
- Allergies and Sinusitis
- Heart Disease
- Alzheimer's
- Raynaud's Disease
- Chronic Fatigue Syndrome
- Chronic Pain
- Migraines
- Vascular Surgery
- Wound Healing
- Cystitis
- Intestinal Disease
- Spine inflammation
- Hepatitis
- Lyme Disease
- Multiple Sclerosis
- Autoimmune Disease
- Urologic Disease
- Ear infections
- Chronic Infections
- Dental Infections
- Joint Pain
- Parkinson's Disease
- Degenerative Joint Disease
- IBS
- Heavy Metal Accumulation
- Mental Stress
- and more

# Methods of Administration

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It is important to note that there are several methods of therapeutic Ozone administration which differ greatly in their use, potency, and effectiveness. Some treatments are applied locally to areas of concern, whereas others work to affect the body systemically. Systemic treatments benefit the body as a whole in some fashion where as Local treats a specific area.

Ozone can be administered to the human body in a number of ways. At **Emerald Wellness**, we specialize in **High Dose Intravenous Ozone Therapy** and **Ozone Joint Therapy (OJT)**. We believe that these are the two most potent and effective healing Modalities utilizing Ozone in a clinical environment, and that they provide the most dramatic results. We will discuss these treatments in further detail but first let us examine some of the other ways Ozone can be administered.

## At Home Ozone Administration

It is possible to purchase Ozone generators for at home use in order to mix Ozone with oils and waters. Ozone infused oils can be applied topically to treat skin conditions, and Ozone infused waters can be ingested to attempt to elevate ozone levels in the body. One can even spend time in Ozone Saunas to saturate the skin in levels of Ozone for heightened detoxification effects. Ozone generators can also be used for cavity insufflation. Insufflation involves blowing Ozone gas into a body cavity, such as the rectum, vagina, or ear canal, in order to have the body absorb the therapeutic molecule.

All of these treatments can be performed safely at home provided one is sufficiently educated in the treatment methodology and has the correct equipment. Do not attempt these at home procedures without the proper training or without discussing with a medical professional. While Ozone is completely safe when administered in a clinical setting, incorrectly treating yourself with Ozone can be dangerous if you are unfamiliar with

the proper dosing and the equipment. While all of these at home treatments can have positive benefits for one's health, they generally do not compare in efficacy to treatments provided by medical professionals in a clinical setting. Through injection and intravenous administration, one is able to deliver much higher and more therapeutic levels of Ozone to the body's cells, blood, tissues, and organs.

## Ozone Joint Therapy (OJT) / Prolozone

When a patient is presenting with symptoms of aching joints, sore back, ripped ligaments, or other physical pain in a specific area of the body an Ozone injection can be very helpful. At **Emerald Wellness** Joint injections are performed where a dose of Ozone is administered directly into the joint space or affected area. This approach to joint pain can cause regeneration and rebuilding of new ligaments and cartilage tissue. Inflammation is decreased and the weaker areas of the joint are strengthened. Quite often a degenerated or injured joint will take a series of 3-5 injections over 8-10 weeks to see significant healing. One can generally expect a 15%-25% improvement with each local injection. **OJT** therapy is a powerful localized way to treat specific areas of the body with the therapeutic benefits of Ozone.

When a more systemic approach is required for healing, such as when dealing with chronic illness, then intravenously administering ozone is the most efficacious way to achieve this result.

## Ozone Joint Therapy Continued

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**Ozone Joint Therapy (OJT)**, also known as **Prolozone**, is a technique that combines the principles of Neural therapy, Prolotherapy, and Ozone Therapy. It often involves injecting combinations of procaine, anti-inflammatory medications, vitamins, minerals, and ozone gas into degenerated or injured joints, and areas of pain.

### What is Ozone Joint Therapy/Prolozone?

**Ozone Joint Therapy (OJT)** is a non-surgical reconstructive treatment for ligament and joint damage pioneered by Dr. Frank Shallenberger, the “father” of Medical Ozone in North America. It is a powerful treatment for several forms of musculoskeletal and joint pain, including chronic neck and back pain, degenerative and arthritic areas of the body, degenerated discs, and shoulder and elbow pain, to name a few. According to the American Academy of Ozonotherapy, because **OJT** therapy actually corrects the pathology of the disorder there is a 75% success rate, in which the chronic pain sufferer is able to become completely pain free.

### Common Causes of Musculoskeletal and Joint Pain

Some injuries are able to heal faster than others because they have more adequate blood flow to the affected area. This allows healing factors and nutrients to better saturate the site of injury and repair the region. Injuries can be acute, or develop gradually from the natural degeneration of the moving parts of the body due to ongoing mechanical stress, and failures of tissue to repair. When there is poor blood circulation this can lead to decreased oxygen, nutrients, and healing factors reaching the site of injury, which causes impaired healing and a buildup of lactic acid. Increased lactic acid contained within injured tissue results in inflammation and pain. Poor circulation, limited oxygen, decreased supply of nutrients and healing factors, and a buildup of lactic acid around an affected area can make it very difficult for the immune system to effectively repair and heal. A pain-inflammation cycle is triggered which leads to further degeneration of the area and chronic pain. This problem can often be reversed permanently with Prolozone Injection Therapy.

### How does OJT/Prolozone Injection Therapy Work?

This injection therapy works through three primary mechanisms. The first is that the introduction of oxygen facilitates the healing of damaged tissues. The second mechanism is due to Ozone’s unique molecular structure and reactivity which we have previously discussed. Ozone acts as a therapeutic oxidant which immediately improves oxygen uptake in the damaged tissue, stimulates growth factors for injury regeneration, and neutralizes damaging free radicals. Thirdly, the introduction of injected anti-inflammatory compounds, vitamins, and minerals improves blood flow to the affected area and reduces inflammation. This promotes better healing and the regeneration of damaged tissues. So, each component of Prolozone Therapy has a specific biological purpose. Procaine acts to re-establish cellular membrane potentials. Anti-inflammatory substances decrease edema and swelling. The use of vitamins and minerals provide necessary substrates for oxygen utilization, which in damaged tissues are usually deficient. And finally, oxygen uptake is directly stimulated by Ozone.

## The Treatment Process

Prolozone injections should take place in a clinical setting by a trained medical professional. Generally, the doctor combines a precise mixture of ozone, procaine, anti-inflammatory compounds, vitamins, and minerals into a syringe and slowly injects this into the affected area with a needle. The mixture is able to quickly saturate the injured area, reduce pain, and begin to facilitate healing. The procedure is quite painless, besides from the initial poke of the needle, and is extremely safe. Other than the rare possibility of an allergic reaction to one of the liquid components, there are no contraindications to its use.

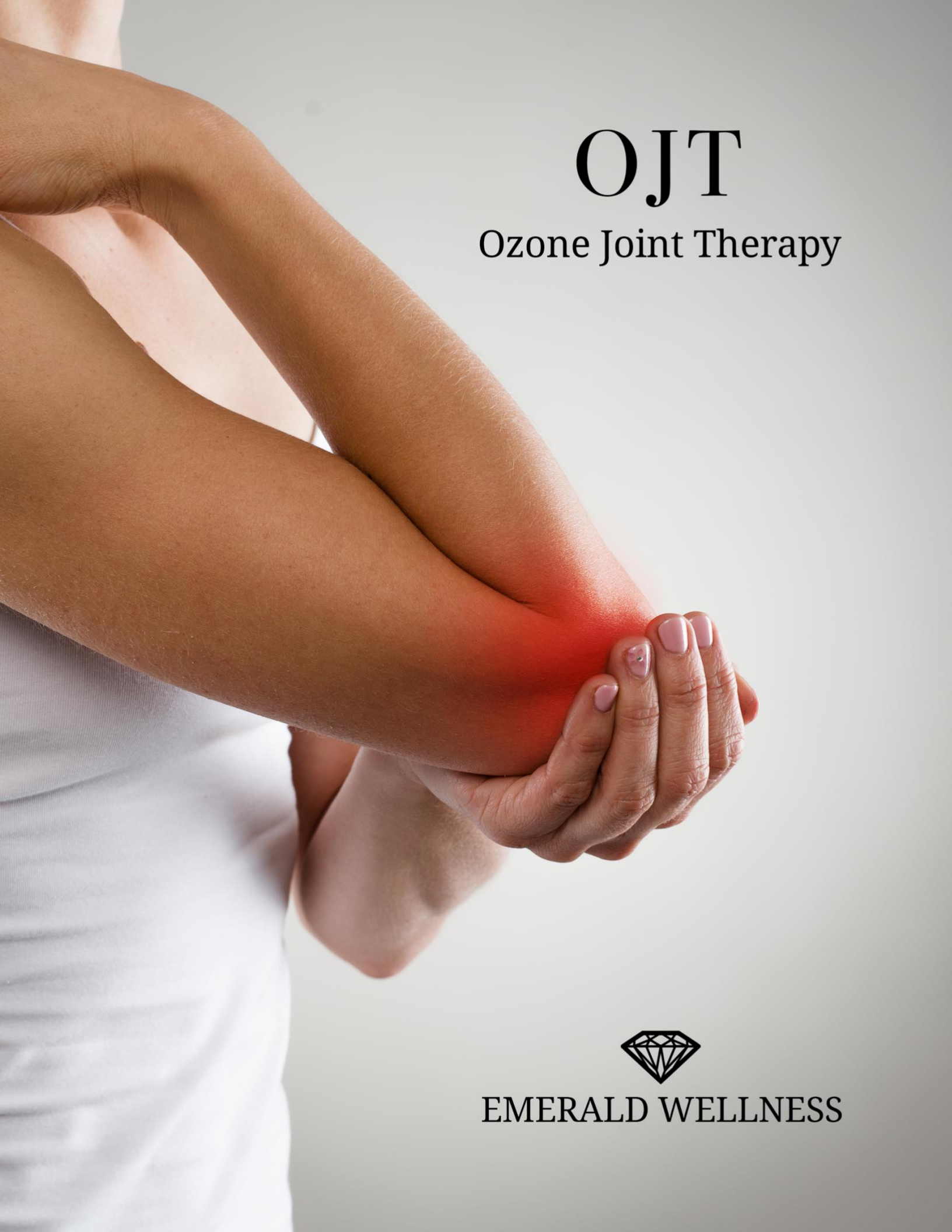
## What the Patient Can Expect

Quite often a degenerated or injured joint/area will take a series of 3-5 injections over 8-10 weeks to see significant healing. One can generally expect a 15%-25% improvement with each local injection. This being said, every patient's body and healing response is unique. Some may require fewer or more injections depending on their specific condition and how they respond to treatment. It is not uncommon for an individual to notice dramatic results after a single Prolozone injection. Sometimes it is recommended that, both during and following treatment, patients undergo rehabilitative practices with a physiotherapist to correct any weaknesses that may have developed in the affected area.

## Common Conditions that Respond well to OJT/Prolozone Therapy:

- TMJ
- Tennis Elbow
- Sports Injuries
- Carpal Tunnel Syndrome
- Chronic Back pain
- Chronic Neck Pain
- Degenerated Discs
- Degenerative & Arthritic Ankles
- Degenerative & Arthritic Hips
- Degenerative & Arthritic Knees
- Dental Infections
- Heel Spurs
- Neuromas
- Non-Union Fractures
- Painful Scars
- Pelvic Disorders
- Plantar Fasciitis
- Post-op Pain
- Rotator Cuff Injuries
- Sciatica
- Sinus Infections





# OJT

Ozone Joint Therapy



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# Intravenous Ozone Therapy

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Intravenous Ozone Therapy involves administering controlled doses of Ozone into the patient's blood in order to achieve systemic healing effects throughout the entire body. There are a few different approaches to IV Ozone therapy which can vary in application: Major Autohemotherapy (Traditional IV Ozone), Hyperbaric Ozone therapy (10 Pass), and HidoseO3.

## Major Autohemotherapy (MAH) "Traditional IV Ozone"

For many years **Major Autohemotherapy (MAH)** was one of the most effective ways for systemically introducing medical Ozone into the body. This is a procedure that is practiced by medical doctors all around the world, and is sometimes seen in North American naturopathic clinics.

**(MAH)** involves intravenously withdrawing about 200ml of blood from the patient into an IV bag. The patient's blood is then mixed with around 3000ug of ozone gas, by injecting the gas into the IV bag, and gently turning the bag over until the blood is saturated. After the patient's blood has been mixed with the Ozone the IV bag is suspended, the same as in regular IV therapy, and gravity is utilized to have the ozonated blood drip back into the patient intravenously.

**Major Autohemotherapy (MAH)** is an effective therapy for systemically delivering Ozone to the body and for quite some time was one of the best ways of doing so. One of its drawbacks is that sometimes for chronically ill patients to truly reap the benefits of this therapy, multiple treatments are often required per week, since a limited amount of ozone is received during each session. Treatments can be suggested as many as 5 times per week with each session costing several hundred dollars. This unfortunately can make receiving the benefits of systemic ozone therapy inconvenient and elusive to patients who cannot afford it. This is not to say Traditional **MAH** therapy is not an effective

or useful ozone treatment. Many individuals see great benefits from receiving just a few MAH sessions, and the concentrations of Ozone delivered to the body are extremely therapeutic. However, there are conditions which seem to further benefit from more intensive Intravenous Ozone Treatments. Sometimes patient response to MAH therapy can be used to determine whether an individual should receive Higher Dose intravenous treatments.

The new **Hyperbaric Ozone Therapy (High Dose '10 Pass')** has been able to make up for some of the clinical shortcomings of MAH therapy. It is similar to MAH in that blood is drawn from the patient, but much more intensive; using higher concentrations of ozone on larger volumes of blood. It is an efficacious treatment that can safely administer much higher doses of ozone at a more reasonable price, considering the amount of Ozone the patient is able to receive per session.

## Major Autohemotherapy (MAH) vs. Hyperbaric Ozone Therapy (High Dose '10 Pass')

**Hyperbaric Ozone Therapy (High Dose '10 Pass')** resembles **Major Autohemotherapy (MAH)** but has some fundamental differences in potency and effectiveness. In both MAH and 10-pass ozone, blood is drawn from the patient and combined with ozone, which has the effect of killing microbes and cleansing the blood. The patient's ozone infused blood is then reinjected intravenously. The MAH method tends to draw

about 200-250 ml of blood and infuses this blood with roughly 3,000ug of ozone.

With **Hyperbaric Ozone Therapy** the blood-draw infusion process is done ten times; hence the term "10-pass" and usually take 1-2 hours to complete. One 10-pass treatment is about the equivalent of 10 MAH treatments when comparing the amount of blood being treated, however this can be misleading since the 10-pass treatment actually uses much higher concentrations of Ozone on the blood. The 10-pass method mixes the patient's blood with the ozone in a **pressurized hyperbaric environment** which allows for greater reactivity with the patient's blood. The total amount of ozone supplied to the blood and body in a typical "10-Pass" treatment is 140,000ug compared to the 3,000ug of ozone in the MAH method. This means

that 10-Pass ozone supplies nearly **50 times** the amount of Ozone to the body than regular intravenous Ozone treatment. The result is a treatment which administers a greater amount of ozone in a shorter amount of time, which in turn better saturates the red blood cells with oxygen and allows for deeper and greater penetration into the body.

This new, potent, and effective administration method has become an exceptional tool which better harnesses the therapeutic effects of ozone and results in better patient outcomes. High Dose '10 Pass' Ozone therapy should always be practiced in a clinical setting by a trained medical doctor.



Image courtesy of NEOMED

# Hyperbaric Ozone Therapy (10 Pass)

The Hyperbaric “10 Pass” method has great clinical success when it comes to intravenously administering patients with high concentrations of therapeutic Ozone and achieving positive patient outcomes.

## 10 Pass Ozone

The ground-breaking Hyperbaric 10 Pass method of administering ozone was pioneered by University Medical Doctor and PHD Dr. Johann Lahodny out of Austria. Extensive research and clinical application of the ‘10 pass’ system by Dr. Lahodny and others has yielded extraordinary results. This method is becoming the gold standard for medical ozone administration in Europe. Many individuals have been flying from

North America to Europe to receive this treatment for a number of health concerns. According to Dr. Lahodny with 10 sessions of Hyperbaric Ozone therapy over the course of 10 weeks most ailments are repaired. This is a grand claim to make, considering the array of complex health conditions which afflict individuals in so many different ways, yet there is no question that Dr. Lahodny has been documenting a very high rate of successful patient outcomes across a multitude of diseases. Dr. Lahodny’s latest research, as to why High Dose 10



Pass ozone is having such excellent patient outcomes, has indicated that this treatment method is actually stimulating stem cell and ATP production within the body. This therapeutic benefit seems to be unique to High Dose 10 Pass therapy and is not seen in other methods of Ozone therapy.

## The Hyperbaric Ozone System

In order to perform Hyperbaric Ozone Treatment a sophisticated machine is required that is able to: draw a patient's blood under vacuum, generate ozone gas and mix it with the patient's blood under pressure (produce a Hyperbaric environment), accurately dose the amount of ozone gas being administered, and much more.

The **Herrmann Hyper Medozon Ozone System**, which is developed and engineered in Germany, is one of the most advanced hyperbaric Ozone generators available to the medical community.



This unit provides a blood withdrawal technique which is able to draw, treat, and reinject the patient's blood all within a completely self-contained hyperbaric environment. The patient's blood is therefore only ever interacting with the therapeutic ozone before being re-administered. This is extremely beneficial because it improves sanitary practices and is able to infuse the patient's blood in much safer and gentler way.

A touch screen and clear operational guidance system allows for the practicing medical doctor to have meticulous control over the entire treatment process. The required concentration of the gas mixture can be modified continuously and the combined analyzer automatically keeps the ozone concentration at an even level. Needless to say, the operation of a complex ozone system such as this requires a knowledgeable medical professional, who is trained in the specifics of the instrumentation, ozone therapy, intravenous medicine, and has an advanced medical background.

## Contraindications

Intravenous Ozone Therapy administered with a Hyperbaric system is generally well tolerated by most patients. In a small number of patients this particular IV ozone will not be recommended if the patient has compromised or weak vein structures. Doing multiple passes of Ozonated blood, or any IV liquid for that matter, puts a mild stress on the veins, which has a negligible effect on most individuals. For an individual with poor vein health, however, other forms of IV Ozone therapy may be deemed more suitable.

## Hyperbaric Ozone Therapy for the Patient

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Hyperbaric Ozone Treatments are tailored to the needs of the patient. An individualized treatment plan will be designed by the attending doctor to optimize patient outcomes. Some patients require fewer passes (not the whole 10 pass) depending on the condition.

When receiving Hyperbaric Ozone Therapy at you will be able to relax comfortably in a bed or padded chair. The Attending Nurse or Doctor will check your blood pressure and vitals to make sure you are in fit condition to receive the therapy.

A small IV catheter will be inserted into a healthy vein in order to draw blood (Usually a vein on the inside crux of your elbow). If you have ever received an intravenous injection at a hospital, or elsewhere, this is the exact same procedure. One may experience a slight poking pain at the insertion spot as with any needle, but generally this procedure is quite painless.

The Hyperbaric Ozone System will then slowly draw about 200-220 ml of blood into a transparent hyperbaric container connected to the machine. It is here that the blood is mixed with a meticulously controlled dose of ozone. As the ozone saturates the blood, the blood often turns brighter in colour. This is because it has become more oxygenated, something we desire. The fact that the blood is being infused in a hyperbaric environment means there is greater reactivity between the blood and medical ozone.

After the blood and plasma has become thoroughly treated with the appropriate dose of ozone it is then re-administered through the same IV back into your body. The ozone saturated blood is then able to systemically cycle through your body, delivering the therapeutic effects of the ozone to your cells, tissues, and organs.

The process discussed so far is considered a “one pass”, since blood has been drawn, treated, and reinjected one time. The process can be safely repeated multiple times with the majority of patients receiving 6-10 passes. With every successive pass, you can often visually see your blood becoming redder and cleaner throughout the treatment.

After you have received the desired amount of ozone passes, the IV catheter will be removed from your arm and a small bandage will be applied to the injection site.

Many patients report significant results after their first High Dose ozone treatment. More complex cases can require additional treatments. As stated before Dr. Lahodny’s clinical experience indicates that 10 treatments over the course of 10 weeks is often able to have very dramatic positive patient outcomes for a number of complex illnesses.

This being said not everyone responds to Ozone therapy the same. Generally, most people attain noticeable therapeutic benefits for their health, but as with any treatment, there is never 100% guaranteed success.



## The HiDose O3 Method

A new method of high dose intravenous ozone therapy which aims to integrate the clinical success of '10 pass' Ozone therapy while making it more affordable for the patient.

### HiDose O3

The **HiDose O3** method is a brand-new form of intravenous ozone therapy developed by the **Society of Progressive Medical Education (SOPMed)**. This method combines certain aspects of both MAH (Traditional IV Ozone therapy) and Hyperbaric '10 Pass' Ozone.

HiDose O3 is similar to Traditional IV Ozone in that it is a '1 pass' system where 200-300ml of blood is drawn from the patient under regular pressure and put into an IV bag. However, this method uses a specialized IV bag and instead of using a syringe to intravenously draw the blood, a medical fluid pump is utilized to draw the patient's blood directly into the IV bag. Next, a bubbler tube is connected between the specialized IV bag

and an Ozone generator. A Controlled amount of Ozone is mixed with the blood before it is re-administered intravenously back into the patient via the medical fluid pump.

This method uses similar equipment to traditional MAH therapy in terms of the Ozone generation device, but the procedure is greatly enhanced by the utilization of the specialized IV bag and medical fluid pump. This blood-draw-infusion process is also an ideal setup for introducing UV light therapy to the patient's blood if desired. Where HiDose O3 truly differs from traditional MAH therapy is in the concentrations of Ozone which are infused into the patient's blood during a single session.

## Why is it called “HiDose”?

The **SOPMed HiDose O3** method differs from **Hyperbaric ‘10 Pass’ Ozone Therapy** in that it does not use a hyperbaric ozone generating device and the blood is treated with ozone under regular atmospheric pressure. Furthermore, the HiDose O3 treatment method generally calls for treating only ‘1 pass’ of 200-300ml of blood, whereas the ‘10 pass’ method, as the name suggests, does multiple passes treating larger volumes of blood.

Where HiDose O3 is seen to be similar to the Hyperbaric method is in the much higher doses of ozone used to treat the patient’s blood. As stated before Traditional IV Ozone uses around 3000ug of ozone to treat about 200 ml of blood. Hyperbaric Ozone uses about 14,000ug of ozone to treat 200 ml of blood, and this is done 10 times. So, a total of 140,000ug of ozone is generally used to treat about 2000ml of blood. The **HiDose O3** method uses around **70,000ug** of ozone to treat 200-300ml of blood in a single pass. That is the equivalent to the amount of ozone used in 5 passes of hyperbaric ozone on the smaller volume of blood.

**SOPMed** has done live blood analysis research to discover the safe upper limits of ozone saturation in human blood. In their tests, what they discovered was that 90,000ug of ozone can be safely administered to 300ml of blood without any negative effects on the health of red blood cells. It is when ozone saturation begins to exceed 135,000ug that some slight trauma can be observed affecting the red blood cells. This research has been utilized to develop the HiDose O3 method, in which much higher doses of Ozone are used to treat the patient’s blood compared to conventional methods.

## The Benefits of HiDose O3

**SOPMed** developed the HiDose O3 method with the notion of trying to attain the clinical benefits of Hyperbaric Ozone therapy ‘10 Pass’ at a price range which is more affordable for the patient. Hyperbaric Ozone Systems are quite expensive, require trained medical operators and diligent supervision, have expensive waste materials, and lengthy treatment times. HiDose O3 attempts to mitigate some of these costs while still providing a High Dose Ozone treatment. Additionally, the fact that the HiDose treatment requires only a single pass of blood can make this method a more appropriate treatment option for patients with compromised or weak vein structures.

Even though the HiDose O3 method treats a lesser volume of blood, it is thought that the higher concentrations of Ozone work to achieve therapeutic effects in the body similar to Hyperbaric Ozone therapy. HiDose O3 is such a new treatment method that it does not have the same degree of clinical history, but so far, the results have been very promising. According to **SOPMed**, many of their trained doctors are seeing great positive patient outcomes with just a few HiDose O3 treatments. SOPMed, is currently training many doctors throughout North America and collecting larger amounts of clinical data on patient outcomes in order to present their findings to the public.

The HiDose O3 treatment method is promising to be another extremely useful tool for reaping the many therapeutic health benefits of administering medical ozone to the body.

## HiDose O3 Therapy for the Patient

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HiDose O3 Treatments are tailored to the needs of the patient. An individualized treatment plan will be designed by the attending doctor to optimize patient outcomes.

When receiving a HiDose O3 Treatment you will be able to relax comfortably in a bed or padded chair. The Attending Nurse or Doctor will check your blood pressure and vitals to make sure you are in fit condition to receive the therapy.

A small IV catheter will be inserted into a healthy vein in order to draw blood (Usually a vein on the inside crux of your elbow). If you have ever received an intravenous injection at a hospital, or elsewhere, this is the exact same procedure. One may experience a slight poking pain at the insertion spot as with any needle, but generally this procedure is quite painless.

Next a medical fluid pump is used to draw 200-300ml of blood into the specialized IV bag which is suspended from an IV pole. A bubbler tube is connected from the IV Bag to an Ozone generator and a controlled dose of medical grade Ozone (usually around 70,000ug) is mixed with the blood. As the ozone saturates the blood, the blood often turns brighter in colour. This is because it has become more oxygenated, something we desire.

After the blood has been treated with the Ozone, the medical fluid pump is then used to slowly re-administer the blood back into the patient. The ozone saturated blood is then able to systemically cycle through your body, delivering the therapeutic effects of the ozone to your cells, tissues, and organs.

The IV catheter is removed from your arm and a small bandage will be applied to the injection site. The entire treatment process should last around 45 minutes.

Many patients report significant results after their first HiDose O3 treatment. More complex cases can require additional treatments.

This being said not everyone responds to Ozone therapy the same. Generally, most people attain noticeable therapeutic benefits for their health, but as with any treatment, there is never 100% guaranteed success.

## Preparing for an Intravenous Ozone Therapy Appointment

1. Please **drink 0.75 liters of water 30 minutes prior** to starting each therapy session
2. **Drink another 0.75 liters of water** immediately prior to each session
3. Please **inform the nursing staff or doctor of any changes to medications** that you are using that are not listed in your chart or that you think we may not be aware of
4. Heparin, an anticoagulant, is used during Intravenous Ozone Therapy. Heparin interferes with normal blood clotting for about 10-12 hours. As such you should not receive heparin if there is any **active bleeding** (eg- nose bleeds, hemorrhoids, etc.)
5. Certain health conditions warrant discussion/consideration before receiving High Dose Ozone Therapy- hyperthyroidism, low platelets, epilepsy, blood disorders, pregnancy

Intravenous Ozone Therapy is completely safe and generally well tolerated with no side effects. Some individuals may experience a detox reaction as the ozone therapy destroys toxins in the body. This detox reaction can present as feeling achy and fatigued. Cleansing effects are usually of short duration, lasting for a few hours. Drinking plenty of water helps mitigate these possible symptoms.



## Conclusion

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If you are interested in learning whether **Intravenous Ozone therapy** or **Ozone Joint Therapy** may be right for you please contact one of our medical staff to book a **free consultation**. At **Emerald Wellness**, we believe that the synergistic union of conventional medicine and well-researched integrative health therapies can be the best way to achieve positive patient outcomes. We are dedicated to educating our patients, and only recommend specific treatments when we firmly believe they are the right course of action for improving patient health and wellbeing. If we do not deem that Ozone therapy is appropriate for your case we will let you know. Our main concern is doing everything within our means to help you find your healthiest self.

We are very proud to be able to provide Canadians, right here at home, the numerous health benefits of Intravenous Ozone Therapy. If this therapy is deemed right for you we will do everything possible to make your Ozone Treatment an informative and enjoyable experience.

-Dr. Adeleye Lemi Adebayo  
Medical Director



EMERALD WELLNESS  
Find your Healthiest Self

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